The investigation of the interesting collection of remains secured by Mr. Paret, had led Prof. L. to examine a small collection of bones in the Museum of the Academy, which had been presented upwards of thirty years ago, as a sample of many of the same kind discovered in Durham Cave, Bucks Co., Pa. The cave appears to have since been obliterated in the quarrying of limestone. At the time of the presentation of the specimens of bones they were recognized as pertaining to existing species of animals and were therefore regarded as of little interest, though fortunately they have been preserved.

Prof. Leidy remarked that these bones were of the same character as those of Hartman's Cave, and he had distinguished among them the following:

The Black Bear, *Ursus americanus;* Raccoon, Skunk, Gray Fox, Deer, Moose, *Alce americanus;* Woodland Reindeer, Bison, Gray Squirrel, Rabbit, Beaver, Muskrat, Porcupine, Woodchuck, Woodrat, Wild Turkey, Box Tortoise, Snapper, Snake, Sturgeon, and Catfish.

The examination of these collections show that the exploration of small caves may not only prove of ethnographic value, but serve to give us information relative to the early fauna of the country. Thirty years ago Prof. Baird gave an account of the exploration of some bone caves in this State (Proc. Am. Assoc., II, 1849, 352). He refers to a vast accumulation of remains in one of the caves, and remarks that the number of species of mammalia found is twice that of present existing species in Pennsylvania. It is to be regretted that no further account has yet been given of the species to which the remains belong.

Dimorphic Flowers in Houstonia.—Mr. Thos. Meehan remarked that flowers dimorphic in their sexual character were well known. Generally there was little difference in the corolla between the short styled or long styled flowers, but in *Houstonia cærulea, L.*, the long styled form was accompampanied by a thick tube, while the tube in the short styled form was not more than half the diameter of the other. In this species of *Houstonia* the anthers were placed on a ledge which was at the base of the tube in the long styled form. In the short styled form the anthers were brought to the mouth of the corolla without any lengthening of filaments, but by the bringing up of this ledge on which the anthers are placed. The position of the anthers at the mouth or at the base of the tube, was in fact decided by the modification of the form of the corolla tube. This had been explained in the first series of "Flowers and Ferns of the United States." In a recent examination of *Houstonia serpyllifolia*, Mx., on the top of Roan Mountain in North Carolina, Mr. Meehan found precisely the same characters in that species. On the same mountain *Houstonia purpurea, L.*, abounds, and also has a similar sexual dimorphism, but in this case the elevation of the anthers is due

to the lengthening of the stamens and the form of the corolla-tube is the same in both sexual forms. The number of plants representing each sexual form is about equal. In a handful of plants gathered at random there were of *Houstonia serpyllifolia* thirteen with long styles and short stamens, and eleven with short styles and the anthers in the mouth of the tube. Of *Houstonia purpurea* there were thirteen with long styles to fourteen with short ones. An interesting fact in connection with these sexual differences is that the dimorphism seemed to be wholly in the shortening of the style or filaments, and did not seem to effect injuriously the anthers or stigma. Both forms seemed to be equally fertile.

In answer to a question by Mr. Redfield, Mr. Meehan said there did not appear to be any intermediate forms. The stigma or the anthers were either exactly at the throat of the flowers, or exactly at the base. In regard to cross fertilization the long styled would be in the best position for receiving pollen from foreign flowers, but the short styled one would more readily receive its own. As cross and self-fertilization had an equal advantage he would infer that the dimorphism had little reference to fertilization as a final cause.

Cleistogamy in Oxalis Acetosella, L.—Mr. Meehan observed that under the forests of *Abies Frazeri*, on Roan Mountain, North Carolina, early in August *Oxalis Acetosella* was abundantly in flower.

In a large number of cases examined he could find no traces of any disposition to produce seed vessels, but pushing out beneath the soil or near the surface were numbers of cleistogene flowers, from which, in all probability, seeds would be produced in abundance.

Most plants which produced cleistogene flowers, also produced the usual open corolla bearing flowers at one time or another in the season, and it had been suggested that this bright petalled condition was for the purpose of attracting insects, and thus give the species some chance to escape from the evils which cleistogamy, or close-breeding is supposed to involve. It is worthy of note that no day insects were noted to visit the flower of the *Oxalis* blooming in these dark fir forests, though nocturnal ones might supply the deficiency. Mr. Meehan remarked, however, that no rule could be deduced from single observations, or observations repeated in the same localities, as the behavior of plants and insects varied with circumstances. The *Oxalis* might not be cleistogene, might be visited by insects, and the open flowers might be fertile elsewhere. He referred in illustration to *Amphicarpæa monoica*, Nutt., which near Philadelphia sometimes produced no seeds from the petaliferous flowers, while at other times these flowers were remarkably fertile. Again, all his examinations in the locality named had resulted in finding that the